

## **Terms of Reference**

### **Special Committee 209**

#### **Revision Minimum Operational Performance Standards for ATCRBS/Mode S Transponder**

#### **1. REQUESTER AND SPECIAL COMMITTEE VOLUNTEER LEADERSHIP:**

|              | Requester           | Co-chairman           | Co-chairman                  | Designated Federal Official |
|--------------|---------------------|-----------------------|------------------------------|-----------------------------|
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#### **2. DELIVERABLES:**

##### **Products**

##### **Due Date**

- |   |               |
|---|---------------|
| 1. Revision 'D' to Minimum Operational Performance Standards for Air Traffic Control Radar Beacon System/Mode Select (ATCRBS/Mode S) Airborne Equipment – RTCA Document DO-181C | December 2006 |
| 2. Revision 'A' to Minimum Operational Characteristics – Airborne ATC Transponder Systems – RTCA Document DO-144  | May 2007      |

#### **3. TERMINATION OF COMMITTEE ACTIVITIES**

Special Committee (SC) 209 will terminate its activities when the Program Management Committee (PMC) approves the committee's final document. Any change/extension of the committee's work program requires prior PMC approval.

#### **4. NAS ARCHITECTURE LINKAGE**

The ATCRBS/Mode S Transponder is a key tool in both the U.S. National Airspace System (NAS) as well as in the global airspace environment, supporting such functions as air traffic identification/separation, European elementary (ELS) and enhanced (EHS) surveillance, Automatic Dependant Surveillance – Broadcast (ADS-B), Traffic Information Service (TIS), and Traffic Collision Avoidance System (TCAS).

#### **5. REQUIREMENTS ASSESSMENT:**

SC-209 recommendations will help assure that aircraft continue to operate safely within the NAS and are compatible with other NAS and global air traffic management architecture elements as well as TCAS. In addition, the efforts of SC-209 will likely lead to a future harmonized TSO/ETSO-C112 that will greatly benefit U. S. manufacturers by adding consistency in international specifications. A revised TSO-C74C is also expected to be an outcome as a result of this committee's activity.

## **6. TERMS OF REFERENCE:**

The special committee should develop a work program, with schedule and milestones, to accomplish the following terms of reference:

- A. Revise DO-181 MOPS to reflect latest amendment to ICAO Annex 10. Note: At this time it is not planned that SC-209 will incorporate Change 1 to DO-181C, which provides performance and testing specifications for a “hijack” feature, into the revised DO-181 MOPS.
- B. Review DO-218B, MOPS for the Mode S Airborne Data Link Processor, and extract pertinent sections for inclusion in the revised DO-181 MOPS.
- C. Establish close working relationships with SC-186, WG-3 (1090 MHz ADS-B MOPS), and WG-4 (Surveillance Transmit Processing (STP) MOPS) to coordinate any efforts that might impact 1090 MHz Extended Squitter operation.
- D. Coordinate with EUROCAE WG-49 current efforts to revise ED-73B, to harmonize with their work product to address performance and testing specification for the European elementary (ELS) and enhanced (EHS) surveillance functions. Note: ELS and EHS are not used in the NAS, but the functions are included in the designs built by U.S. TSO-C112 manufacturers.
- E. Revise DO-144 MOPS to capture technical changes/advances necessary to ensure proper operation with Mode S and TCAS interrogators. Note: Some of the work in revising the DO-181 MOPS will benefit this effort.
- F. Develop recommend changes to 14 CFR Part 43, Appendix F transponder continued airworthiness maintenance requirements for consideration by AFS-300.

## **7. OTHER CONSIDERATIONS:**

### **EUROCAE**

RTCA SC-209 is an independent advisory committee, not a joint RTCA/EUROCAE committee. However, coordination between RTCA SC-209 and EUROCAE Working Group 49 will be undertaken to insure that harmonization, as practical, is maintained between RTCA DO-181D and EUROCAE Document ED-73C, when approved by the RTCA PMC and EUROCAE Council respectively.